March 29, 2018

The City Council of the City of Idaho Falls met in Special Meeting (Idaho Falls Power Board), Thursday, March 29, 2018, in the Council Chambers in the City Annex Building located at 680 Park Avenue in Idaho Falls, Idaho at 7:00 a.m.

Call to Order, Announcements, and Introduction of Guests:
There were present:
Mayor Rebecca L. Noah Casper
Councilmember Thomas Hally
Councilmember Shelly Smede
Councilmember Michelle Ziel-Dingman
Councilmember Jim Francis
Councilmember John Radford

Absent:
Councilmember Jim Freeman

Also present:
Jackie Flowers, Idaho Falls Power Director
Bear Prairie, Idaho Falls Power Assistant Manager
Doug Hunter, Utah Associated Municipal Power Systems (UAMPS) Chief Executive Officer and General Manager
Mason Baker, UAMPS Chief Legal Officer and General Counsel
Chris Colbert, NuScale Chief Strategy Officer
Randy Fife, City Attorney
Michael Kirkham, Assistant City Attorney
Dana Briggs, Economic Development Coordinator
Bud Cranor, Public Information Officer
Kathy Hampton, City Clerk

Mayor Casper called the meeting to order at 7:06 a.m.

Call to Order, Announcements, and Introduction of Guests:
Mayor Casper stated the Idaho Falls Power (IFP) Board of Directors is comprised of the City of Idaho Falls Councilmembers. She indicated the City's public power utility was established in 1900 and this utility provides low cost of electric power to the citizens of Idaho Falls. The City has approximately 95% of a carbon free emissions portfolio, credited to the wisdom and the visionary of previous generations of leaders. Mayor Casper stated the Small Modular Reactor (SMR) project is being presented by the City's membership through UAMPS. The City has been a member of UAMPS for approximately 25 years, with Director Flowers currently serving as the Chairman of the UAMPS Board of Directors. Mayor Casper stated UAMPS has a long, unblemished history of developing successful power projects as these projects are built with their members. She believes all projects have been well vetted in similar forums. She also believes this project has garnered attention nationally, and possibly internationally, and the generation of carbon free power can be historical for the power industry.
Mayor Casper recognized several guests in attendance, including Department of Energy-Idaho (DOE-ID) representatives, former IFP Citizen Review Committee members, Regional Economic Development Eastern Idaho (REDI) principal, and a former legislator.

Carbon Free Power Project Presentation – Introduction:
Director Flowers stated the City has traditionally developed and invested in its own generation resources. This includes partnerships with UAMPS and Bonneville Power Administration (BPA). She indicated the last attempt with locally owned resources occurred in the 1990's with approximately $2M investment into a hydro project in the Shelley area. Due to environmental challenges, the City was unable to proceed with development of the project. Director Flowers stated following that investment, it was realized a partnership needs to occur as investing in generation for a small utility is an expensive endeavor. She reiterated the City joined UAMPS in the mid 1990's and

believes the partnership has exceeded initial expectations. She briefly reviewed tasks performed by UAMPS, as an extension of and on behalf of IFP staff, including access to Power Sales Contracts. She stated UAMPS invests in research projects as the members wish. Director Flowers stated the City has interest in investing in base load energy and adding additional carbon free resources to the portfolio for the growth of the community. She indicated this is a long process and a complicated project. UAMPS will address the concerns and risks in order to advance the project. She reiterated the tremendous value in the UAMPS resource and membership. Mayor Casper stated the Nuclear Regulatory Commission (NRC) has taken note of vetting by all participating agencies. She believes this is a vital part of the process.

Carbon Free Power Project Presentation – Presentation:
Mr. Hunter stated UAMPS is a not-for-profit, joint action group consisting of 46 members in six (6) western states. 34 of those members are currently involved in this specific project, making it one of the largest projects of the 17 projects developed over the previous 40 years. He indicated due to UAMPS being project based, the open public process must occur for each project. Mr. Hunter believes, following review of all potential vendors for the SMR, NuScale provided the best benefit for all of public power. He presented the following:

What is the Carbon Free Power Project (CFPP)?

- Energy Efficiency – foundation that allows engagement with the customer
- Distributed Generation – the most efficient place to put generation is at the load source (solar, fuel cells, battery, etc.)
- Small Modular Reactors

Why CFPP works

- Green House Gas Regulation
- Resource Replacement
- Regulated Markets

Mr. Colbert stated NuScale power technology began with a DOE $3M grant in 2000 with partnership of the Idaho National Laboratory (INL). The technology advanced and in 2007 NuScale Power was formed as well as engagement with the NRC. In 2011, Fluor became the principal shareholder of NuScale Power, owning approximately 97% of the shares. In 2014, DOE awarded NuScale Power, through a competitive process, a $226M cost share award which allowed reimbursement of 50%. In January 2017, a 12,000 page design certification application was submitted to the NRC, with total investment of $700M to that point. Mr. Colbert stated through that process, NuScale is very confident and comfortable to be successful. NuScale currently has approximately 350 staff members.

Mr. Colbert reviewed the size comparison of the NuScale Power Modules (NPM), stating the modules are $1/20^{th}$ of the power and $1/100^{th}$ of volume versus a typical pressurized water reactor. The modules are built in-factory and then shipped. He reviewed the pressurized water reactor basics; the internal components of the SMR; the typical LWR safety systems and the NuScale safety systems comparisons (system and components needed to protect the core); and the Reactor Building cross section. Mr. Colbert stated the reactor building will house the NPM, the fuel pool, and the reactor pool. He indicated the reactor building is also aircraft impact resistance and contains exits on all four (4) sides of the facility. He reviewed the 74-acre footprint site layout.

Mr. Colbert stated the NuScale design has achieved the "Triple Crown" for nuclear plant safety. The plant can safely shut-down and self-cool indefinitely with no AC or DC power, no additional water, and no operator action. The safety valves align in their safest configuration on loss of all plant power. These details of concept were presented to the NRC in December 2012 with public announcement in 2013. Mr. Colbert stated the NRC approved the NuScale design innovation, as described in a January 2018 press release. He noted this validation was an important development.

Mr. Colbert reviewed the licensing process, stating the Design Certification Application (DCA) was completed at the end of 2016, accepted for docketing in March 2017, and design certification is scheduled for 2021. He indicated

numerous questions were received from the NRC with first phase of review scheduled for April 2018. He noted the total projected duration for NRC review and approval is approximately 46 months.

Mr. Colbert reviewed NuScale Differentiators:

- Simple
  - Factory-built, integral nuclear steam supply and containment
  - Fewer systems to construct and maintain
- Safe
  - Unlimited coping period for "Fukushima-like" events
  - Core damage once every 300,000,000 reactor years
  - Site Boundary Emergency Planning Zone
- Economic
  - Competitive with Natural Gas Combined Cycle
  - Integrable with variable renewable energy sources
  - Flexible, add 50MW modules as needed

Councilmember Radford questioned if this project would assist with the large amounts of renewable energy currently being generated. Mr. Colbert believes this technology will provide flexibility and integrate with those markets. Councilmember Francis questioned the previous two-step NRC process. Mr. Colbert clarified that process previously included a construction permit followed by an operating license. This process included several challenges. He reviewed the current process stating UAMPS would submit their own Combined License Application (COLA) which would cover construction and operation in one application process. Councilmember Francis questioned if water would be drawn from the aquifer. Mr. Colbert stated water could be used for cooling or the plant could be air cooled. Councilmember Francis questioned on-site fuel storage. Mr. Colbert stated spent fuel could be stored as directed by the NRC process, inside the reactor building along with dry casks stored outside the reactor building. Councilmember Dingman questioned if forecasting has occurred on projected plant downtimes or if there may be other potential economic ramifications. Mr. Colbert indicated the turn down associated with plant ramping is an economic decision that will be left to the operator of the plant dependent upon market conditions. Councilmember Hally questioned the anticipated savings beyond first of kind technology. Mr. Colbert stated savings only represent the first phase of the project although he believes savings will increase with future phases of the project. Councilmember Hally questioned the consumption prediction relative to gas plants. Mr. Colbert believes there is always a natural risk although he does not see any fundamental changes with consumers.

Mr. Hunter reviewed the 3-step Fuel Fabrication Process, including the fuel pellets, fuel rods (which are approximately half the size of the current fuel rods), availability of fuel, and the fuel assembly. He stated the fuel will be refueled every two (2) years and will be regulated by the NRC on a regular basis. He briefly reviewed the dry cask storage process.

Mr. Hunter stated this project is modeled from a 90% capacity factor. He recognized the team partnership – NuScale/Fluor/Energy Northwest; DOE/NRC; UAMPS participants and Tennessee Valley Authority (TVA).

Mason Baker reviewed:
Contract and Permits

- Engineering, procurement and construction
- NRC License
- DOE lease and Power Purchase Agreement – INL, Los Alamos, other federal facilities in the intermountain west
- Water Rights – dictated by cooling technology, approximately 18,000 acre feet per year for wet cooling versus 414 acre feet per year dry cooling. Cooling options are still being vetted by Power Engineers. The selected cooling technology may require UAMPS to acquire existing water right options from existing water right holders. This would ensure the use of water could be transferred to the project site with the assistance of wells pulling water from the aquifer. The number of wells would be dictated by the water need of the

project. Conversations with water right holders would occur in the following year, with preference to conclude the process prior to submitting the NRC application.

Engineering, Procurement and Construction (EPC) Development Agreement – between Fluor, NuScale, and UAMPS. The EPC agreement would act as a bridge agreement into a final EPC arrangement. Fluor and NuScale will be revising cost estimate for the CFPP along with running an economic competitiveness test with price ceiling of $65/MWhour. The executed version is estimated to be completed by end of April 2018.

Power Sales Contract (PSC) Overview – similar to other PSC with unique differences to the resources

- "Take-or-pay" payment obligation
- Payments made from electric revenue systems as an operating expense
- Rate covenant to collect sufficient rates to meet payment obligations
- Step-up obligation if participant defaults, capped at 25%

Mr. Baker stated the Project Management Committee (PMC) is the body that drives the development of the project and has complete decision-making authority. He reviewed the PMC roles and responsibilities, stating certain decisions are required to be made by a super majority vote (75% by number and entitlement shares).

Budget and Plan of Finance Contents

- The estimated total development costs to the completion of development
- The estimated total cost of acquisition and construction
- The estimated commercial operation date
- A pro forma analysis of expected costs
- The proposed funding and financing arrangements

Mr. Baker reviewed licensing period: first phase. He indicated the effective date of the PSC has been extended to allow multiple meetings with the participants. He reviewed the list of activities once the PSC becomes effective. The first phase would conclude with UAMPS submitting NRC license application in June 2020. At that time each participant would be given option to withdraw or reduce their participation of the project. Mr. Baker stated there is an interim step in March 2019, all costs to that point would be 100% reimbursable if the project does not move forward.

Mr. Baker reviewed licensing period: second phase. He indicated there is a 39 month review period for the NRC. This period concludes with UAMPS receiving its NRC license application. This would be the last option for the participants to withdraw from the project.

Moving forward – construction period (32 months), operating period (up to 80 years), decommission period (commence once operating period concludes, subject to NRC license).

Mr. Baker reviewed the current 34 participants in the project. He stated DOE participation includes existing COLA technical partnership; additional technical partnership; and JUMP (Joint Use Module Project) lease agreement.

What we are asking?

- Determine participation percentage
- Understand the terms
- Approve the Power Sales Contract

<u>Idaho Falls Power Portfolio Integration:</u>

Director Flowers stated this conversation has been occurring since approximately 2010. She indicated as UAMPS developed the PSC a Legal Committee and a Finance Committee have been instituted for the various elements of the project, Idaho Falls has had representatives on both committees. Director Flowers also noted in 2009 she was designated by the Council as the delegate to the UAMPS project committee. She indicated in September 2015, the

Council designated an interest in the study phase at the 10MW level. Included in the 10MW interest is financial obligations associated with this project which is included in the annual Idaho Falls Power (IFP) budget.

Director Flowers reviewed CFPP budget and plan of finance draft:

UAMPS
CARBON FREE POWER PROJECT - BUDGET & PLAN OF FINANCE
3/26/2018

Budget & Plan of Finance (Section 601)

Idaho Falls (the "Participant"):

Interim Period (10 MW)	5.4377%
150 MW Subscribed (10 MW)	6.6667%
Fully Subscribed (10 MW)	1.6667%

Section 601(a)

(i) Development Costs Incurred thru 3/31/2017:

	100% Gross Cost	Participant Net of Cost Share	Start	Finish
	$ 3,069,943	$ 45,643	April 2015	March 2017

Estimated Costs to Completion of Development:

	100% Gross Cost	Participant Net of Cost Share	Start	Finish
Interim Period (FY2018)	$ 1,527,026	$ 47,437	April 2017	March 2018
Licensing Period - 1st Phase (Maximum)	6,000,000	100,000	April 2018	March 2019
Licensing Period - 1st Phase (Remaining)	83,499,764	1,097,385	April 2019	May 2020
Licensing Period - 2nd Phase (Preliminary)	496,303,067	8,271,718	June 2020	June 2023
	$ 587,329,857	$ 9,516,539	April 2017	June 2023

(ii) Acquisition & Construction Preliminary Estimated Costs:

	Preliminary 100% Gross Cost	Preliminary Participant Net of Cost Share	Start	Finish
	$ 4,237,666,633	$ 71,047,138	April 2015	Nov 2027

(iii) CFPP Estimated Timeline for the Development & Construction of Intial Facilities:

	Start	Finish	# of Mos.
Interim Period - FY2018 (PSC Executed)	April 2017	March 2018	12 mos.
Licensing Period - 1st Phase (COLA Submittal)	April 2018	May 2020	26 mos.
Licensing Period - 2nd Phase (COLA Issued)	June 2020	June 2023	37 mos.
Construction Period (COD)	July 2023	November 2027	41 mos.

(iv) Price Target (2017) Estimated range: $45.00 to $65.00

Director Flowers indicated the PSC will be submitted in April 2018 for Council approval with first expenditure of $100,000. The PSC establishes the on- and off-ramp decisions points. Director Flowers stated when IFP participates with UAMPS in the development of a generation source, IFP has the option to bring cash forward or finance through a PSC. She indicated UAMPS does not have a rating for financing, each project is financed based on the financial strength of each participating member. She reviewed previous financial investments the City of Idaho Falls made in their own locally owned and operated hydropower projects and the value of those projects in 2015 dollars. Brief comments followed. Director Flowers stated IFP is a very strong financial participant. Mayor Casper noted rates will become effective once the CFPP goes on-line. The current rate payers would not be paying for tomorrow's consumers. To the response of Mayor Casper questioning the 40-year financing, Mr. Hunter stated a definitive study will occur regarding 60-year financing with one (1) relicensing option.

Mr. Prairie reviewed the IFP portfolio:

- Hydropower (87.61%) – City provides ~25% of energy used, BPA provides majority of hydropower from 31 hydropower plants in Columbia River Basin (contract expires in 2028)
- Nuclear (6.92%) – BPA provides electricity from Columbia Generating Station in Washington (current contract expires in 2028)

- Wind (1.57%) – UAMPS power purchase agreement for wind from Horse Butte Wind (HBW) east of Idaho Falls
- Solar (0.004%) – Two (2) arrays at IFP headquarters
- Market (7.81%) – Largely fossil fuel based (coal or natural gas) purchased through UAMPS

Mr. Prairie reviewed Idaho Falls Load Trends. He stated customer growth remains steady although load growth remains flat, or is declining, as less energy is being used. He noted new large single load(s) are being negotiated.

Mr. Prairie reviewed $65 SMR - Forecast Net Power Supply Costs vs. Status Quo. Net power supply cost without the SMR = $33.5M, net power supply cost with SMR = $4.5-5M. Under a low water scenario with SMR = $39.8M. Mr. Prairie reviewed $65 SMR - 15MW Load Growth - Forecast Net Power Costs vs. Status Quo. The SMR still costs more money under the scenario of more load growth because the alternate option for serving the load is going to the wholesale market, which changes quickly depending on supply and demand. Mr. Prairie indicated the SMR may cost more although there is less risk exposure and it limits volatility which can stabilize prices for customers on a long-term basis. He noted BPA has had 10% rate increases every two (2) years for the last three (3) rate cycles. This rate increase could continue.

Mr. Prairie reviewed $65 SMR Cost and % Impact on Rates (10MW SMR). As BPA rates and the market prices increase, the delta between the $65 SMR and other power supply options decrease. Therefore, the impact of an SMR in the portfolio, or not in the portfolio, decreases. It was noted, the % rate increase would be a one-time increase if left in rate base cost of service for future years or could be phased in over years as the project gets closer to going on-line. Councilmember Hally believes the volatility for BPA is greater than the long range forecast and volatility for wholesale rates in general.

Next Steps/Q&A:

- Execution of PSC in April 2018
- Continued project participation through UAMPS Project Management Committee and Board of Directors
- Continued project updates to City Council
- Community outreach related to project participation over the next year prior to next phase (COLA submitted)
- Consider continued participation at each off-ramp

Mr. Hunter indicated there are approximately 8-10 other cities (of the 34 project participants) who have approved their power sales contracts while the remaining cities continue to hold meetings related to their project participation. He believes the majority of participants will determine their course of action in the near future. He noted three (3) additional entities, who are not members of UAMPS, are also interested in the project. He noted hedges are not considered permanent participation but rather could be accomplished through standalone power sales contracts. Mr. Hunter stated initial interest expressed was ~180MW. He clarified DOE is 50% of the cost reimbursement for this project.

Director Flowers expressed her appreciation to UAMPS, NuScale, and those in attendance. Mayor Casper stated any public comments are welcome.

There being no further business, the meeting adjourned at 9:27 a.m.

s/ Kathy Hampton
CITY CLERK

s/ Rebecca L. Noah Casper
MAYOR